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[A number of years ago, I read an article in the journal, *Science*, that described the concerns of two scientists at Los Alamos National Laboratory, that there could be a criticality accident at Yucca Mountain. One of the scientists, Charles Bowman, who is an expert in neutron physics, believed that the buried waste could erupt in a nuclear explosion. According to the article in *Science*, Bowman thought that this could happen if the plutonium from the glass logs was to disperse into the surrounding rock. As the system got hotter it would disperse into a greater volume of surrounding rock and the reaction would take off creating a huge nuclear blast.

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Although some scientists have discounted this potential accident, there is a legitimate criticality issue that is not yet resolved. As recently as October 1999 the NRC requested additional information from the DOE. [I am submitting two pages from the October, 1999 NRC/DOE Technical Exchange. The NRC's position is that the DOE does not have the test data to support the DOE's contention that criticality is not a significant issue. It's one thing to have a chain reaction inside a reactor vessel at a nuclear power plant in a controlled environment. A chain reaction or an uncontrolled chain reaction—a criticality accident—at Yucca Mountain would be terrifying.

In 1995, The New York Times had a front-page article about Dr. Bowman's concerns that there could be a nuclear explosion at Yucca Mountain. The article stated that "the existence of so serious a dispute so late in the planning process might cripple the plan or even kill it." Now, more than four years later there are still serious concerns but planning continues for using this site. The article in *Science* about Dr. Bowman's theory stated that the "DOE selected Yucca Mountain as the *only* contender for a deep underground repository." Because it is the only contender or because so much money has been spent to study the feasibility issues does not mean that Yucca Mountain is the solution for disposing of our radioactive wastes. I know others testifying will address other concerns and unanswered questions about the Yucca Mountain proposal. No plans should proceed until each and every one is answered.

The problem of disposal is enormous, but we all have a responsibility to make sure that the solution is a safe and sensible one for all of us and all generations to come.]

Respectfully submitted,

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